

# Executive Clemency Online Application and Verification System (ECOAVS)

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## Executive Summary

- **Goals:**
  1. To automatically redact secure information while allowing external customers and law enforcement agencies to electronically access the Executive Clemency process over the Internet.
  2. To enable online application submission and electronic validation of the Executive Clemency process.
- **Solution:**

The project was implemented with open source software to facilitate reuse by other organizations at minimal cost. Purchased software included Adobe Acrobat and signature capture software for one user.
- **Timetable for planning and implementing the project:**

Initial planning and high level design required approximately 3 person weeks. Detailed design, application development and implementation required approximately 6 person months. Similar applications are expected to be built upon the reusable framework in 1-3 person months, depending upon complexity.
- **Costs of project:**

Total cost of approximately \$48,000.00 was funded cooperatively by the Georgia Archives, the State Board of Pardons and Paroles and the Georgia Technology Authority.
- **For more information on this project:**

[www.sos.state.ga.us/archives/rms/paer.htm](http://www.sos.state.ga.us/archives/rms/paer.htm)

## Implementing Secure Access to Confidential Information

The State Board of Pardons and Paroles administers executive clemency for the state of Georgia. These responsibilities include the investigation and decision to restore civil and political rights that were lost as the result of a felony conviction, as well as the granting of Pardons (with and without the right to bear firearms). Since the Board's creation, this process has been labor intensive, with the electronic creation of documents in word processing software being the most significant technological advancement to date. Paper applications, investigations and correspondence are all received centrally, tracked on both index cards and log books and then faxed or mailed to the appropriate field office for investigation if required. Compliance with the Georgia Open Records Act adds additional layers of time and resources to an already labor intensive process.

An electronic system to receive applications, view or change the status of any given investigation and generate correspondence within a single system was determined to be the desired solution. The opportunity for applicants, employers and law enforcement officials to inquire electronically about the status of requested investigations led to the decision that the solution should be web based. The ability to view or download a copy of granted clemency documents, as well as the ability to verify the validity of the documents through the use of a system generated code led to the developed solution.

Information provided in applications for executive clemency is semi-structured in that identifiers and general applicant information is structured consistently while information regarding one or several offenses for which the clemency is being sought may be included. The flexibility provided by an XML (eXtensible Markup Language) data store allows for efficient management of this type of data. Tools for manipulating XML data are widely available without cost in

the “open source” software market. The Apache Project ([www.apache.org](http://www.apache.org)) is a leader in the development and distribution of these technologies.

The Executive Clemency Online Application and Verification System (ECOAVS) was developed using open source software almost exclusively. The system incorporates two java based applications (one for external users and one for authorized agency users) that connect to a single XML database through the use of a web browser. Internal users are authenticated against a central agency directory via Local Directory Access Protocol (LDAP) to determine the access level granted to the individual user. External users and internal users without an appropriate access level are authorized only to submit an application for clemency or to query the status of an application. In order to further control access to this group of users, the last name, date of birth and last four digits of the social security number are required information when inquiring the system for the status of an application. Those external users that have access to this information (predominantly the applicant, prospective employers or law enforcement officials) have the ability to verify the status of an application and even view or print a copy of the document presented in Adobe PDF format.

The system allows original documents to be generated from data stored in the XML database, signed through a signature capture device and stored in Adobe PDF format. At the time the original document is saved, electronic validation codes are generated that may be used to compare any electronic copy of the document to the code generated when the document was first saved. If the code generated when the electronic copy is tested exactly matches the code stored in the system, it is a true copy. If the resulting code does not match, the copy has been altered in some way.

Initially intended to be a pilot project to test whether the open source tools and XML data structures could be effectively implemented, the project is being carried to full implementation because of the promise that has been demonstrated. Pilot funding by the Secretary of State, Georgia Archives as part of a National Historical Publications and Records Commission grant, and the Georgia Technology Authority in the total amount of \$24,330.00 provided for the design, configuration and development of the data structures, core functionality and basic interfaces required in testing the selected open source technologies. The State Board of Pardons and Paroles has continued to fund the project, providing more functionality and easier to use interfaces. Projected to be implemented by the end of June, 2004, the total project cost is anticipated to be less than \$48,000.00. Expenses for this project have been allocated predominantly to contract programmers, with development being completed on existing agency hardware. Of the total cost, less than \$1,000.00 was expensed on a signature capture device, Adobe Acrobat and signature capture software. Upon completion, the application will be accessible through the Parole Board’s web site ([www.pap.state.ga.us](http://www.pap.state.ga.us)).

As indicated in the table of benefits, this application incorporates a ‘framework’ that may be easily reused in other projects involving electronic submission of applications where document generation and online viewing of documentation are desirable. By modifying the source code used in the application, similar functionality may be achieved much less

expensively in future projects, reducing anticipated development costs and time to implementation by 50% or more in most cases.

## Benefits

Objective	Benefits Achieved
Electronic document accessibility	XML encoding allows for creation of two document views – 1. Internet access to open data and 2. Agency Intranet access to all data – thereby reducing staff time devoted to redaction in response to Georgia open records requests
Online submission of Executive Clemency Application	Applicants with access to the internet may electronically provide the information required for consideration
Ability to query the status of a particular application online at any time	Applicants, employers and law enforcement may verify the status of an application 24 hours per day, 7 days per week
Electronic processing of submitted applications	Authorized agency staff may change the status of an application as it moves through the investigation process, providing easier tracking than in a manual system
Electronic documentation generation	Authorized agency staff may generate documents previously typed in word processing software by selecting the appropriate response option in the system, reducing time required to process an application.
Electronic document validation	Validation codes generated at the time of original document creation provide for the validation of an electronic copy as an original through comparison of a code generated on the copy with the original document code stored in the system
Reuse of the application architecture and components	The application structure and code may be utilized in other applications requiring redaction for public access without the need to completely redevelop them, reducing the cost of other similar applications.

Every year, thousands of documents (totaling several hundred cubic feet per year) are sent to the Georgia Archives for long term and permanent storage. The system architecture implemented in this system is already being looked to by Parole Board staff as the foundation for another collaborative project – the electronic capture, indexing, validation and secure transmission of digital images to the Georgia Archives as the repository of the state's historical record.